PATENT COOPERATION TREATY

Fr m th INTERNATIONAL SEARCHING AUTHORITY	PCT
To: FLEHR HOHBACH TEST ALBRITTON & HERBERT LLP Attn. TRECARTIN, Richard F. 4 Embarcadero Center, Suite 3400 San Francisco, CA 94111-4187 UNITED STATES OF AMERICA Comments on Abstract due	NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL SEARCH REPORT OR THE DECLARATION (PCT Rule 44.1)
Review Foreign Refs (U.S.) 10/29/00	Date of mailing (day/month/year) 29/09/2000
Applicant's or agent's file reference FP67933-1RMS RCTRMS BTC	FOR FURTHER ACTION See paragraphs 1 and 4 below
International application No. PCT/US 00/ 07626	International filing date (day/month/year) 22/03/2000
PANGENE CORPORATION	
1. X The applicant is hereby notified that the International Search Filing of amendments and statement under Article 19: The applicant is entitled, if he so wishes, to amend the claim When? The time limit for filing such amendments is norma International Search Report; however, for more de Where? Directly to the International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Fascimile No.: (41-22) 740.14.35	s of the International Application (see Rule 46):
For more detailed instructions, see the notes on the accordance 2. The applicant is hereby notified that no International Search Article 17(2)(a) to that effect is transmitted herewith.	
	nal fee(s) under Rule 40.2, the applicant is notified that: n transmitted to the International Bureau together with the est and the decision thereon to the designated Offices.
no decision has been made yet on the protest; the app	licant will be notified as soon as a decision is made.
4. Further action(s): The applicant is reminded of the following: Shortly after 18 months from the priority date, the international ap If the applicant wishes to avoid or postpone publication, a notice priority claim, must reach the International Bureau as provided is completion of the technical preparations for international publical. Within 19 months from the priority date, a demand for international wishes to postpone the entry into the national phase until 30 mo. Within 20 months from the priority date, the applicant must perfor before all designated Offices which have not been elected in the	of withdrawal of the international application, or of the in Rules 90 bis.1 and 90 bis.3, respectively, before the attion. al preliminary examination must be filed if the applicant in the from the priority date (in some Offices even later). The prescribed acts for entry into the national phase a demand or in a later election within 19 months from the
Name and mailing address of the International Searching Authority European Patent Office, P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer Mireille Claudepierre

NOTES TO FORM PCT/ISA/220

These Notes are intended to give the basic instructions concerning the filing of amendments under article 19. The Notes are based on the requirements of the Patent Cooperation Treaty, the Regulations and the Administrative Instructions under that Treaty. In case of discrepancy between these Notes and those requirements, the latter are applicable. For more detailed information, see also the PCT Applicant's Guide, a publication of WIPO.

In these Notes, "Article", "Rule", and "Section" refer to the provisions of the PCT, the PCT Regulations and the PCT Administrative Instructions, respectively.

INSTRUCTIONS CONCERNING AMENDMENTS UNDER ARTICLE 19

The applicant has, after having received the international search report, one opportunity to amend the claims of the international application. It should however be emphasized that, since all parts of the international application (claims, description and drawings) may be amended during the international preliminary examination procedure, there is usually no need to file amendments of the claims under Article 19 except where, e.g. the applicant wants the latter to be published for the purposes of provisional protection or has another reason for amending the claims before international publication. Furthermore, it should be emphasized that provisional protection is available in some States only.

What parts of the international application may be amended?

Under Article 19, only the claims may be amended.

During the international phase, the claims may also be amended (or further amended) under Article 34 before the International Preliminary Examining Authority. The description and drawings may only be amended under Article 34 before the International Examining Authority.

Upon entry into the national phase, all parts of the international application may be amended under Article 28 or, where applicable, Article 41.

When?

Within 2 months from the date of transmittal of the international search report or 16 months from the priority date, whichever time limit expires later. It should be noted, however, that the amendments will be considered as having been received on time if they are received by the International Bureau after the expiration of the applicable time limit but before the completion of the technical preparations for international publication (Rule 46.1).

Where not to file the amendments?

The amendments may only be filed with the International Bureau and not with the receiving Office or the International Searching Authority (Rule 46.2).

Where a demand for international preliminary examination has been/is filed, see below.

How?

Either by cancelling one or more entire claims, by adding one or more new claims or by amending the text of one or more of the claims as filed.

A replacement sheet must be submitted for each sheet of the claims which, on account of an amendment or amendments, differs from the sheet originally filed.

All the claims appearing on a replacement sheet must be numbered in Arabic numerals. Where a claim is cancelled, no renumbering of the other claims is required. In all cases where claims are renumbered, they must be renumbered consecutively (Administrative Instructions, Section 205(b)).

The amendments must be made in the language in which the international application is to be published.

What documents must/may accompany the amendments?

Letter (Section 205(b)):

The amendments must be submitted with a letter.

The letter will not be published with the international application and the amended claims. It should not be confused with the "Statement under Article 19(1)" (see below, under "Statement under Article 19(1)").

The letter must be in English or French, at the choice of the applicant. However, if the language of the international application is English, the letter must be in English; if the language of the international application is French, the letter must be in French.

NOTES TO FORM PCT/ISA/220 (continued)

The letter must indicate the differences between the claims as filed and the claims as amended. It must, in particular, indicate, in connection with each claim appearing in the international application (it being understood that identical indications concerning several claims may be grouped), whether

- (i) the claim is unchanged;
- (ii) the claim is cancelled;
- (iii) the claim is new;
- (iv) the claim replaces one or more claims as filed;
- (v) the claim is the result of the division of a claim as filed.

The following examples illustrate the manner in which amendments must be explained in the accompanying letter:

- [Where originally there were 48 claims and after amendment of some claims there are 51]:
 "Claims 1 to 29, 31, 32, 34, 35, 37 to 48 replaced by amended claims bearing the same numbers; claims 30, 33 and 36 unchanged; new claims 49 to 51 added."
- [Where originally there were 15 claims and after amendment of all claims there are 11]: "Claims 1 to 15 replaced by amended claims 1 to 11."
- [Where originally there were 14 claims and the amendments consist in cancelling some claims and in adding new claims]:
 "Claims 1 to 6 and 14 unchanged; claims 7 to 13 cancelled; new claims 15, 16 and 17 added." or
 - "Claims 7 to 13 cancelled; new claims 15, 16 and 17 added; all other claims unchanged."
- 4. [Where various kinds of amendments are made]: "Claims 1-10 unchanged; claims 11 to 13, 18 and 19 cancelled; claims 14, 15 and 16 replaced by amended claim 14; claim 17 subdivided into amended claims 15, 16 and 17; new claims 20 and 21 added."

"Statement under article 19(1)" (Rule 46.4)

The amendments may be accompanied by a statement explaining the amendments and indicating any impact that such amendments might have on the description and the drawings (which cannot be amended under Article 19(1)).

The statement will be published with the international application and the amended claims.

It must be in the language in which the international application is to be published.

It must be brief, not exceeding 500 words if in English or if translated into English.

It should not be confused with and does not replace the letter indicating the differences between the claims as filed and as amended. It must be filed on a separate sheet and must be identified as such by a heading, preferably by using the words "Statement under Article 19(1)."

It may not contain any disparaging comments on the international search report or the relevance of citations contained in that report. Reference to citations, relevant to a given claim, contained in the international search report may be made only in connection with an amendment of that claim.

Consequence if a demand for international preliminary examination has already been filed

If, at the time of filing any amendments and any accompanying statement, under Article 19, a demand for international preliminary examination has already been submitted, the applicant must preferably, at the time of filing the amendments (and any statement) with the International Bureau, also file with the International Preliminary Examining Authority a copy of such amendments (and of any statement) and, where required, a translation of such amendments for the procedure before that Authority (see Rules 55.3(a) and 62.2, first sentence). For further information, see the Notes to the demand form (PCT/IPEA/401).

Consequence with regard to translation of the international application for entry into the national phase

The applicant's attention is drawn to the fact that, upon entry into the national phase, a translation of the claims as amended under Article 19 may have to be furnished to the designated/elected Offices, instead of, or in addition to, the translation of the claims as filed.

For further details on the requirements of each designated/elected Office, see Volume II of the PCT Applicant's Guide.

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rul s 43 and 44)

Applicant's or agent's file reference	(Form PCT/ISA/2)	Transmittal of International Search Report 20) as well as, where applicable, item 5 below.
FP67933-1RMS	ACTION	
International application No.	International filing date (day/month/year)	(Earliest) Priority Date (day/month/year)
PCT/US 00/07626	22/03/2000	22/03/1999
Applicant		
PANGENE CORPORATION		
This International Search Report has been according to Article 18. A copy is being tra	n prepared by this International Searching Auth ansmitted to the International Bureau.	ority and is transmitted to the applicant
This International Search Report consists X It is also accompanied by	of a total of 6 sheets. a copy of each prior art document cited in this i	report.
Basis of the report		
	international search was carried out on the bas ess otherwise indicated under this item.	is of the international application in the
the international search w Authority (Rule 23.1(b)).	as carried out on the basis of a translation of the	e international application furnished to this
b. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international search was carried out on the basis of the sequence listing: contained in the international application in written form. filed together with the international application in computer readable form. furnished subsequently to this Authority in written form.		
	o this Authority in computer readble form.	
the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.		
the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished		
2. Certain claims were fou	nd unsearchable (See Box I).	
3. X Unity of invention is lac	king (see Box II).	
4. With regard to the title,		
X the text is approved as su	ubmitted by the applicant.	
the text has been establis	shed by this Authority to read as follows:	
5. With regard to the abstract,		
the text is approved as su	• • • • • • • • • • • • • • • • • • • •	was it appears in Pay III. The applicant way
the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.		
6. The figure of the drawings to be pub	lished with the abstract is Figure No.	<u>=</u>
as suggested by the appl		None of the figures.
because the applicant failed to suggest a figure.		
because this figure better	characterizes the invention.	

International application No. PCT/US 00/07626

INTERNATIONAL SEARCH REPORT

Box I	Observations where c rtain claims were found unsearchable (Continuation of item 1 of first sheet)
This Inte	ernational Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:
1.	Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:
2. X	Claims Nos.: 38-45 and partly 46 because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically: see FURTHER INFORMATION sheet PCT/ISA/210
3.	Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).
Box II	Observations where unity of invention is lacking (Continuation of item 2 of first sheet)
This Inte	ernational Searching Authority found multiple inventions in this international application, as follows:
	see additional sheet
1. X	As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2.	As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3.	As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4.	No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
Remark	The additional search fees were accompanied by the applicant's protest. X No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-34

A method of cloning a target nucleic acid comprising:

- (a) providing an enhanced homologous recombination (EHR) comprising:
 - (i) a recombinase
 - (ii) a first and a second targeting polynucleotide, wherein said first polynucleotide comprises a fragment of said target nucleic acid and is substantially complementary to said second targeting polynucleotide, and
 - (iii) a separation moiety;
- (b) contacting said EHR composition with a target library under conditions wherein said targeting polynucleotides can hybridize to said target nucleic acid; and
- (c) isolating said target nucleic acid;

WHEREIN said providing and contacting are done using a robotic system.

A corresponding method of high throughput integrated genomics.

2. Claims: 35-46

A robotic system comprising means for producing a plurality of enhanced homologous recombination compositions.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

Claims Nos.: 38-45 and partly 46

Claims 35 refers to a robotic system for producing a plurality of enhanced homologous recombinations. The description indicates that the system used is based on RoboAmp 4200, a product of MWG Biotech AG, which is of course known in prior art.

Claims 36-45 relate to a multitude of additional devices/means. Support within the meaning of Article 6 PCT and/or disclosure within the meaning of Article 5 PCT is to be found, however, for only a very small proportion of the devices/means claimed. Furthermore, claim 46 relates to an extremely large number of possible additional devices/meams: there are so many options and possible permutations that a lack of clarity (and/or conciseness) within the meaning of Article 6 PCT arises to such an extent as to render a meaningful search of the claim impossible.

In the present case, the claims in question so lack support, clarity and/or conciseness, and the application so lacks disclosure, that a meaningful search over the whole of the claimed scope is impossible. Consequently, the search has been carried out for those parts of the claims which appear to be supported and disclosed, namely those elements concretely described in the examples (especially example 2) and displayed in Fig. 1.

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.